

PHILADELPHIA MEDICAL TIMES.

SATURDAY, APRIL 3, 1875.

ORIGINAL COMMUNICATIONS.

NECROSIS OF THE TEMPORAL BONE.

BY CHARLES SHAFFNER, M.D.,

Assistant-Surgeon to Eye and Ear Institute, Penna.

THE following case is one of the most interesting that has ever fallen under my care, not only on account of its severity, but also from its stubborn progress and final ending in death. I regret that I must furnish an incomplete history, as the post-mortem examination (which the friends would not permit Dr. Keen to make) would have disclosed the exact amount of destruction of the temporal bone, and the condition of the brain and its membranes.

Sarah D., æt. 47, Irish, widow, monthly nurse, without marked symptoms of struma, presented herself for treatment on October 1, 1874, and gave the following history:

She has been a widow for twelve years, and has a daughter fifteen years of age, suffering with chronic otorrhœa. As long as she can remember she has had a discharge from the left ear, of light color, and most probably muco-purulent in character. She has always had good general health, except the discharge from left ear, accompanied with a diminished amount of hearing on that side. The right ear is now, and has always been, healthy. In June, 1874, while attending a labor case, she slept on the floor near an open window, from which exposure an acute otitis media resulted. She had severe burning pains in the region of left ear, which made her cry out with suffering. The otorrhœa was immediately checked by this acute inflammation. The pain deprived her of sleep. She had severe headache, with jumping and throbbing pains in the left ear, attended with tinnitus compared to the roaring of the sea. There was entire loss of hearing on that side. The general symptoms were fever, vomiting, and anorexia.

In a short time a swelling formed about one-fourth of an inch below and posteriorly to the lobe of the left auricle, which was leeches, giving relief for a time. This swelling soon pointed, when it was lanced, discharging a small amount of bloody pus. A fistule was developed, which still remains.

Her attending surgeon performed paracentesis of the membrana tympani, but this did not give her relief. On August 6 the abscess discharged through the membrana tympani, which caused a diminution of suffering. A pain in her ear varying in severity, with a profuse discharge from the external auditory meatus and the fistule, have continued from that time until I saw her on October 1.

On admission, her condition was as follows: She has burning pain in left temporal region. The left side of the face is swollen, with profuse lachrymation of left eye, and some loss of vision. A stiffness of left temporo-maxillary articulation. A very offensive breath, a furred tongue, no sore throat, but thinks the discharge from the ear enters the throat by the Eustachian tube; a very poor appetite, and inability to eat anything solid from the pain which mastication causes in the ear. She is rather pale and thin, and feels weak. Complaints of pain upon tapping with the finger over the mastoid region, but there is no redness here. A very offensive, profuse, and clear discharge from external auditory meatus, and from fistule under the lobule. The dis-

charge contains a number of small irregular yellowish flakes, something like very small rice-grains macerated a long time in water. There is almost entire loss of membrana tympani. Does not hear a moderately loud-ticking watch, even on strong contact, in left ear, but hears a moderately elevated voice quite distinctly. A small probe passes up the fistule for about two inches upwards and inwards without any difficulty, when dead bone is reached, apparently in the neighborhood of the tympanum. When the ear is washed out with the syringe, the water is driven out through the fistule in a thin stream to a distance of three or four feet, showing a communication with the external auditory canal.

The treatment consisted of iron and quinine, occasional anodyne to ear, and good food in a liquid form. She was ordered to wash the ear out frequently with lukewarm water with a syringe at home, and to keep it as clean as possible. The local treatment was syringing, inflating by Politzer's method, with the application of poultices mixed with poppy-heads or tincture of opium. These measures gave partial relief, and were continued.

On October 3 a small piece of necrosed bone was discharged through the fistule, about three-fourths of an inch long, and very narrow, coming, most probably, from the walls of the tympanum.

On October 20 we discovered a piece of bone working out of the external auditory canal, about one and a fourth inches inside the meatus. It was easily seized with the forceps, but quite a strong force could not remove it. We succeeded on October 28 in getting this away in two small fragments. She always felt much better after the pieces of bone came away.

She continued to visit the Institute, but was gradually losing strength. On November 5 she sent word that she had taken her bed and was very sick. I visited her the next day, and found her suffering with fainting-spells. She had frequent severe rigors, or a general tremor of the whole body, and had to be held by attendants. These were not chills, as she had no feeling of being cold. She did not suffer any pain; had hiccough, nausea, and bilious vomiting. Her stomach retained nothing. There was considerable hebetude, and disinclination to talk or to be disturbed. These symptoms indicated that the inflammation was most probably extending to the brain. At this time three fragments of bone were removed from the meatus. She was placed on quinine, stimulants, good food, and subnitrate of bismuth, which relieved the vomiting. The poultices were continued. She gradually improved, and in four days was about the room again. The probe, very carefully used, showed dead bone in all directions inside the auditory canal and tympanum, and I thought the whole petrous portion of the temporal bone was involved, with some extension to mastoid cells. The discharge was very profuse, and in spite of our supporting treatment she was gradually running down. She soon became very weak and unable to eat. The pain in the ear was very acute at times, and I ordered her to dust in the ear one-eighth of a grain of morph. sulph. occasionally.

Finding her attendants could not continue to care for her, I sent her on November 28 to St. Mary's Hospital, where she fell under the care of Dr. Keen. I visited her two days before her death, which occurred about December 12, and found œdema of the lids had set in. She was in a high fever when I saw her, and said she had chills and fever every day,—most probably hectic. She was perfectly conscious; recognized me, and answered all questions correctly. She at no time while under my observation had convulsions, coma, or paralysis, except slightly, as I thought, of left side of the face, due to facial nerve. Dr. Keen informs me

he made every possible effort to obtain a post-mortem examination, and regrets his failure. This would have demonstrated the exact amount of destruction of the temporal bone, and the damage done to the brain, especially as to the existence of abscess of the brain, which we all suspected to exist, but which the symptoms only faintly indicated.

Remarks.—A case of necrosis of the temporal bone is always one of interest and anxiety to the aural surgeon, especially if the patient is an adult and the disease situated in the petrous portion of the bone, as ours was chiefly. Every surgeon notices in his practice a number of cases of cicatrices and depressions over the mastoid cells, indicating severe disease in early life, frequently as a sequela to scarlatina and the other exanthemata; yet the patient has survived it. Caries of the mastoid, especially in young children, is very often recovered from. "Young children will throw off quite large portions of the bone, and yet come off with their lives, while older persons will usually succumb to one of the many consequences" (Roosa). It is also noticed that the prognosis is influenced by the portion of the bone involved, and necrosis of the middle ear is the most dangerous chiefly on account of such complications as meningitis, cerebral abscess, pyæmia, phlebitis with pleurisy and pneumonia (Tanner), paralysis, and fatal hemorrhage. Gruber, Agnew, and others report the extraction of the whole internal ear, the patient living for years afterwards. Very large masses of bone have been removed at times, and the patient has made a lucky recovery; while, again, the operator has unexpectedly found he has exposed the brain, and with grave results, by removing so large a mass.

The case teaches us that no case of otorrhœa is free from risk, and how careful our patients should be not to expose themselves to cold, especially while sleeping, as our case did. It is also very important not to permit a retention of the discharge, for this has frequently caused necrosis, especially in the mastoid cells, with extension to the brain ending in cerebral abscess. A direct communication usually takes place between the diseased bone and the brain-substance through the meninges.

The symptoms of brain-complication sometimes come on suddenly, with a chill, or convulsion, or again with increased pain followed by paralysis, coma, and death.

Our patient gave us only slight symptoms of brain-trouble, so that we could only suspect cerebral abscess; yet Dr. Roosa says, "In very rare cases there are absolutely no symptoms except those of chronic otorrhœa, until death occurs from cerebral abscess."

The treatment of our case was chiefly supporting, combined with the use of anodynes. The discharge should be removed as frequently and thoroughly as possible with the syringe, and the middle ear cleared of pus by Politzer's method. All sequestra should be removed with great care, as both the internal jugular and internal carotid have been opened, causing fatal hemorrhage. Leeches externally, with incisions down to the periosteum, occasionally do good, and even such heroic treatment as the trephine

and actual cautery (Gruber) have been used with benefit.

2042 VINE STREET, PHILADELPHIA.

A CASE OF SUPPOSED FRACTURE OF THE ODONTOID PROCESS, WITH RECOVERY.

BY WHARTON SINKLER, M.D.,

Philadelphia.

THE discussion at the Philadelphia County Medical Society (*Philadelphia Medical Times*, March 13) on Dr. O'Hara's "Case of Injury about the Cervical Vertebra," induces me to detail a case which came under my observation at the Pennsylvania Hospital, while acting as clinical clerk to Dr. J. Forsyth Meigs, through whose kindness I am permitted to report it.

Dr. O'Hara remarked that at first he had considered his patient to have sustained a fracture of the odontoid process, but that the diagnosis had afterwards been abandoned.

"Prof. H. H. Smith, after an examination of the case, thought the odontoid process could not have been broken. No authenticated specimen of such fracture had ever been found; and the few cases reported were from extreme violence."

I have met with several cases in point, where there seems to have been but little doubt that there had been a fracture of this process; in fact, the autopsies clearly revealed separation of the dentiform process from the axis. For instance, there is Dr. Willard Parker's case, quoted by Hamilton:*

The patient, a milkman, was thrown from a carriage upon his head and face. On getting up he complained only of faintness, but the next day he had pain in the back of the head, swelling of the neck, and inability to rotate the head. There was no paralysis. In a few days he had sufficiently recovered to resume his business, but a prominence of the neck just below the occiput and a little to the left of the spine remained.

Five months after the accident he began to complain of numbness in his limbs, and to drag his feet when he walked. Two days later, he died instantly, while sitting in a chair.

At the post-mortem examination the odontoid was found fractured through the base and inclined backwards towards the cord.

Sir Astley Cooper† reports the case of a woman in the Female Wards of St. Thomas's Hospital, who, while sitting up in bed eating her dinner, suddenly fell forward dead. At the autopsy it was discovered that the dentiform process was broken off, and that the head in falling forward had forced the root of the process back against the spinal cord, and thus caused instantaneous death.

Dr. Stephen Smith, of New York, in an elaborate paper on the subject,‡ has collected twenty-three instances of fracture of the odontoid process. One is a case reported by Dr. Bayard (*Canada Medical Journal*, December, 1869):

The patient, a child six years of age, fell five feet, striking on her head and neck. She was unable to move her head without great pain, but there was no swelling or irregularity of the neck. Two months after-

* Fractures and Dislocations.

† Dislocations and Fractures of the Joints, p. 463.

‡ American Journal of the Medical Sciences, October, 1871, p. 378.

wards she had convulsive movements of the arms and legs, followed by paralysis of the whole body below the neck. After remaining in this condition for three months, the patient gradually recovered the power of walking. About two and a half years after the accident a post-pharyngeal abscess formed, from which a bone escaped, and this was decided to be the odontoid process.

I will quote one more case from Dr. Smith, which came under his own observation :

A laborer was admitted to Bellevue Hospital three months after having fallen from a building upon his head. At first he thought his neck was slightly sprained, and continued his work for six weeks. His first symptom of serious trouble was a swelling at the upper part of the neck, which was very painful.

Soon after this, he noticed that the arms were growing weak. During the next three weeks the deformity of the neck increased rapidly, and the head became fixed, with the chin carried to the left side and upwards. The paralysis of motion in the left arm became complete, and the power of the right arm was much impaired; the patient also lost all power in the left leg. Sensation diminished in all the limbs. He had constant headache, and there were frequent severe attacks of dyspnoea. The left arm became oedematous, purple, and cold; there was involuntary action of the bladder and rectum.

The patient died one hundred and sixty days after the injury.

At the *autopsy*, the odontoid process was found to be fractured, and carried forward so as to lie in a nearly horizontal position with the anterior ring of the atlas.

This case is remarkable from the fact that for six weeks after the injury there were no grave symptoms. The fracture of the odontoid must have occurred at the time of the fall, but no displacement can have taken place until some time later, when the swelling upon the neck appeared.

In the following case I do not pretend to say positively that there was fracture of the odontoid process, but the symptoms very closely resembled that injury :

Bernard C., æt. 22 years; single; admitted to the Pennsylvania Hospital May 15, 1872. Soon after coming on duty with Dr. Meigs, on August 1, I was struck by the resemblance between the symptoms of the patient and those in the cases of fracture of the odontoid process reported by Dr. Stephen Smith, to which I have just referred. I obtained the following history :

His general health has never been robust, but he has had no definite ailment except a pain in the left side, which he has had off and on since a child. Has never had syphilis or evidences of scrofula.

On April 1, 1872, while in the act of jumping on a train of cars which were in motion, having left the station about one hundred yards, he lost his footing, and was thrown violently from the car to the ground. He thinks he was struck between the shoulders by the end of the car, but he does not know on what part of his body he fell. He lay unconscious for about two hours, when he recovered himself, and called for help, and was taken home. When moved, he suffered intense pain in the back. There was no external injury to the spine or elsewhere, except a small scalp-wound. Head was flexed strongly, with chin resting on sternum, and was immovable. Both arms were completely paralyzed. There was complete loss of power in the right leg to the knee, but below the knee the paralysis was only partial. No facial palsy; the patient states that he was able to

eat, speak, and whistle with ease. There was slight paralysis of rectum, but none of bladder.

He suffered no pain in spine or head while at rest, but whenever moved the pain was intense. There was acute burning pain in the arms and hands, most severe on the posterior aspect of fore-arms and hands. Sensation was wanting in both arms, and a pin could be stuck deep into the flesh without giving him pain. Sensation in both legs unimpaired.

The only treatment he had was cut and dry cups over the spine.

In a week from the injury, power began to return in the right leg, and he was soon able to move it freely. During the next three weeks no other improvement took place; he remained in bed, appetite was good, and he felt comfortable except when moved. About four weeks after the accident he began to move the fingers of the left hand, and in two weeks more he had all of the movements of the left arm. The right arm remained palsied.

On admission to the hospital, there was a large prominence in the cervical region of spine, not painful on pressure, but somewhat so when the head was moved. Was unable to stand, but had full use of left arm, and could move both legs. Treatment ordered was ext. belladonna, gr. $\frac{1}{2}$, ergot, gr. v, t. d., and Huxham's tincture, a teaspoonful three times daily. This was continued until July 18, when tinct. belladonna, gr. v, ext. ergot. fld., f3j, t. d., was substituted for the pills.

On August 10, he is able to walk about the ward without the least limp, and uses the left arm for everything. The right arm is powerless. There is a swelling upon the neck just below the occiput. The head is flexed, the chin resting upon the breast, and he can raise it but a short distance. There is no pain in the neck, but he complains of its feeling tired if he remains in the erect position long.

August 29.—Improvement continues; can extend head so that chin is four finger-breadths from sternum, and can rotate head about two inches to either side. Has power of flexion and extension of right fingers and wrist, and can pronate and supinate fore-arm, but all these movements are feeble. Paralysis of arm and shoulder still complete. Walks with ease for a short time, but it soon becomes painful to support the head.

Ordered apparatus to support the head, and faradization of right arm. Under this treatment the patient gained rapidly; the apparatus gave him great comfort, and the right arm improved in power.

On January 10, 1873, just before he was discharged from the hospital, he came to my office. He could use the right arm for everything, and could even write quite neatly. The movements of the head were much more free. There was no difficulty in swallowing, and no swelling could be observed in the posterior wall of the pharynx.

I have endeavored to hear of the patient within the last year, but have failed to find out anything of him.

Of course it may be said that in this case there might have been fracture of any of the upper cervical vertebræ; but I think a characteristic feature of fracture of the odontoid process was the position of the head, and the manner in which the patient would steady the head by holding the chin with the left hand.

Dr. Stephen Smith* says, "If the function of the odontoid process is to poise the head upon the spinal column, we should naturally anticipate that the most important and constant symptoms would be those which show that this support is lost."

Since writing the above, I have had the opportu-

* Loc. cit.

nity, through the courtesy of Prof. D. H. Agnew, of examining a beautiful specimen of fracture through the base of the odontoid process in his possession. The patient lived ten days after the accident which caused the injury, and the lesion was diagnosed before death.

348 SOUTH SIXTEENTH STREET, March 18, 1875.

A CASE OF DIRECT TRANSFUSION.

BY FRANCIS L. HAYNES, M.D.

Reported by JOHN R. HAYNES, M.D.

THE subject of the operation, Mattie E., is 27 years old, and married. Her mother is still living, and is healthy; her father suffered from consumption, but died from cancer; one of her sisters suffers from a very chronic form of phthisis. The patient has always been "delicate," and subject to severe attacks of bronchitis. During two of these attacks (which occurred respectively four and two years since) she expectorated small quantities of blood. She has had several attacks of profuse uterine hemorrhage, and states that she has at times vomited blood, and discharged blood per anum.

In April, 1874, after exposure to cold, she contracted bronchitis, which was followed at varying intervals by profuse hæmoptysis. The quantity of blood lost varied at different times from an ounce to a pint. Repeated careful physical examination revealed the existence of no disease except bronchitis.

The attacks of hæmoptysis were not at all ameliorated by the exhibition internally of ergot, digitalis, or any of the numerous astringents; or by inhalations of solutions of the persalts of iron. Finally, hypodermic injections of ergotine (Bullock & Crenshaw) were employed. These invariably checked the hemorrhage within a few minutes, but did not prevent its return. It was found necessary to increase the dose gradually until gr. xv were given at each injection. On several occasions this was repeated the same day. These injections caused great pain and much local inflammation, which, however, in no instance proceeded to suppuration. To allay the pain, morphia was given hypodermically and (as the patient was peculiarly insusceptible to its action) in large doses (gr. j) immediately after each injection of ergotine. When, as occasionally happened, the attack of hæmoptysis was permitted to pursue its own course, the discharge continued with greater or less copiousness during a period of from ten to thirty-six hours.

The digestion was habitually imperfect; attacks of vomiting occurred nearly every day; the appetite was capricious. The menstrual flow occurred at irregular intervals, as had always been the case. The pulse maintained its usual rate and frequency for quite a length of time, but gradually became weaker and more frequent. A more or less troublesome cough, with muco-purulent expectoration, existed.

September 10, 1874, 10 A.M.—Mrs. E. has had a profuse attack of hemorrhage daily for the last ten days. Pulse 144, weak and flickering; respiration

rapid and gasping; temperature (in axilla) 100°. Face pale, lips blanched, and extremities cold. In short, the *tout ensemble* of symptoms was such as to render the prognosis extremely unfavorable. A physician of great intelligence and experience visited the patient, and emphatically expressed his opinion that "that woman was going to die," and it was almost impossible not to agree with him. As a final resort, it was decided to perform transfusion. A young lady in robust health generously offered to supply the blood.

Operation.—The Aveling syringe was carefully prepared by filling it with an aqueous solution of sodium bicarb. (gr. iii-f3i) at 100°. The patient, lying in bed, was well propped up with pillows. The donor sat on a chair by the bedside. The right median basilic vein of the patient and the left of the donor were exposed and nicked, and the canulæ introduced, the one in the donor's vein pointing towards the fingers, that in the patient's vein pointing towards the trunk. Eight ounces of blood were slowly transfused. About two ounces escaped from the donor's vein by the side of the canula, which could not be pushed sufficiently far down the vein because of a change in its direction.

While the injection was going on, the patient became quiet and her lips reddened. Dr. Houghton, who had charge of her pulse, noticed no marked change. When the above-mentioned quantity of blood had been transferred, it was noticed that the donor had grown very pale, and that her pulse was very weak. The apparatus was immediately withdrawn, and compresses placed over the openings in the veins. The donor, who by this time had fainted, was laid on the floor. In a few minutes she regained consciousness, and in a week was as well as ever.

Ten minutes after the operation the patient's pulse was 128, stronger and fuller; temperature 100°; extremities warm.

September 11.—Pulse 122, strong; general condition good.

September 12.—Pulse 120. Slight hæmoptysis, which was readily checked by ergotine.

Notwithstanding four or five slight attacks of hæmoptysis brought on by injudicious exertion, the patient made a good recovery, and in two weeks was able to leave her bed.

March 3, 1875.—Mrs. E. has since the last date enjoyed moderately good health. Notwithstanding the greatest self-neglect and frequent exposure, she has suffered but four attacks of hemorrhage, and very rarely requires medical aid. Physical examination shows no pulmonary disease.

THE PERIOD OF MAXIMUM DEATH-RATE.

BY J. BERENS, M.D.

OF the many paths open to the searching investigation of modern science, there is one which has to a great extent escaped the attention bestowed in other directions, and that, too, when data are so easily obtained, and the results to be derived therefrom so patent as scarcely to elude the most superficial scrutiny. The influence which the time of

day has in determining the favorable or unfavorable issue of disease has only very recently been brought before the medical world in the form of statistics from some foreign hospitals.

Deep-rooted popular prejudices are not often without foundation, and it behooves the physician to yield them all respect, however much at variance they may seem with science.

From time immemorial, whenever the lamp of life has been seen to burn feebly, the friends, and oftentimes the physician, have watched with anxiety and solicitude the period of the day peculiar tradition has marked as critical, and indicated as a point upon the hither side of which lurks the King of Terrors, upon the farther side of which gleams at least a ray of hope.

The "turn of the day" is so often heard in the sick-room, and influences to so great an extent the fears and hopes of anxious friends, that its origin and foundation should no longer be allowed to rest in obscurity.

The following tables, which throw some light upon this subject, are made up from the records of over one thousand deaths which have taken place in the Philadelphia Hospital during the past fifteen months. They are made to show the proportion of deaths which occurred during each period of one, two, three, four, six, and twelve hours in the twenty-four:

Hour.	I. In each hour.	II. In each 2 hours.	III. In each 3 hours.	IV. In each 4 hours.	V. In each 6 hours.	VI. In each 12 hours.	Total.
Midnight.							
1 A.M.	40						
2 "	48	88					
3 "	39		127				
4 "	39	76		164			
5 "	39						
6 "	50	109	146		273		
7 "	82						
8 "	65	146		255			
9 "	52		198				
10 "	59	111					
11 "	38						
Noon.	46	84	143	195	341	614	
1 P.M.	45						
2 "	37	82					
3 "	39		121				
4 "	53	92		174			
5 "	32						
6 "	48	80	133		254		
7 "	47						
8 "	35	82		162			
9 "	34		116				
10 "	36	70					
11 "	28						
12 "	25	53	89	123	205	459	1073

From these tables it will be perceived that a marked difference appears between the number of deaths occurring at different periods of the day. Thus, a maximum death-rate of 82 is observed between 6 and 7 A.M., and a minimum of 25 between 11 and 12 P.M. Again, from midnight until 10 o'clock A.M. the general tendency is to increase, while from 10 A.M. throughout the remainder of the cycle there is a decrease. This becomes more marked proportionately as the numbers are grouped into sections comprising larger periods. The sudden rise in the rate, and the subsequent decline

after this rise has attained its maximum, are well shown in columns III. and IV. To make a general summary, the death-rate suddenly rises at midnight, and continues to increase until about 9 A.M., when there follows a more or less regular decline, until the minimum is attained, a little before midnight.

As to the underlying causes of these phenomena, they are still shrouded in obscurity. Among them, however, two things must occupy a prominent position,—nursing and the solar influence.

The fact of the existence of a correlation between vital and physical forces may be considered as established. In treating of this subject, it must be fully recognized that we are dealing with living animals which have nothing new, as regards the elementary forms of matter of which they are composed.

The vital energy required in the evolution of thought is correlated to heat and other natural forces as closely and as truly as the energy expended in striking an anvil with a hammer. There is no essential difference between them, either as to their quality or mutual convertibility. Organic and inorganic are, in their dependence one on the other, so intimately related that any great motive power for the one must, in its relations to the other, occupy a position of vast importance.

This wonderful unity and close interdependence among the physical forces, mechanical motion, heat, light, and electricity, and the correlation undoubtedly existing between them and the purely vital forces, lead irresistibly to the conclusion that there must occur a complete reversion of their mutual play and activities between the time of meridian of one day and that of the next; for beyond question the sun is the most prominent source of all energy, whether vital or physical.

To return to the tables: it will be observed that the hour in the twenty-four which is marked by the highest death-rate corresponds almost exactly with the time when, taking the average of the year, the sun has been longest below the horizon of this latitude. After the average time when the sun has risen sufficiently above the horizon for its influence to be felt, there begins a tendency in the death-rate to decline until midnight. But this decline continues after the average time of sunset, and even grows more marked towards midnight. This latter point seems to militate against any theory of a solar influence. But the fact should be duly considered that the effects of the sun do not disappear with it, that the patient is generally placed under more favorable circumstances and composing influences which the night brings with it, such as nourishment, arrangement of bedding, and, above all, a cessation of the turmoil, the jars and excitements which inevitably, to a greater or less degree, involve even the best-regulated sick-rooms.

Another matter of quite as much moment as the sun and all the attendant train of forces it evokes and sustains, is the undeniable fact that, however assiduous the attendants on the patient may have been through the night, the vigilance of the watchers relaxes as the day dawns, just at the time when it should be most on the alert. In the many cases when the question between life and death is an even

one, this neglect is fatal, and the waning light expires, when a few drops of stimulus, or the mere rousing of the patient from what is often more lethargy than slumber to administer food or medicine at the appointed hour, would have decided the issue in favor of life. The results arrived at in this paper, meagre as they are, possess no mean significance. The field, though not a broad one, is important, and a few hours spent over hospital registers would amply repay those who have opportunity for such research.

If there is a period in the day when a larger demand is made on the energies of a patient, the time should be known, that at that moment science may step in to stimulate flagging nature, and bear part of the burden under which, with failing strength, she already begins to stagger.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF H. C. WOOD, JR., M.D.

Reported by WM. MASTIN, M.D., Resident.

EPILEPTIC CONVULSIONS WITH CHOREIC TWITCHINGS—NITRITE OF AMYL BY THE MOUTH.

B. D., æt. 20 years; white; seamstress. At the age of twelve she suffered from severe chorea, which, after running a tedious course of many months, left her with occasional spasmodic twitchings of the different muscles of the body, especially of the left side. Three years later she began to have epileptiform attacks, which were preceded by nausea, swimming of the head, with a sense of suffocation, and accompanied by semi-unconsciousness.

By degrees these increased in severity, until they became well-marked attacks of epileptic convulsions, with unconsciousness, frothing at the mouth, biting the tongue, lividity of the face, etc. As the spasms grew worse they diminished in frequency, and the muscular jerkings became constant and more localized. The twitchings are at present almost exclusively confined to the muscles of the left side of the neck, especially the left trapezius, and those of outer side of left thigh and calf. The trapezius by its rapid contractions throws the head backwards in quick succession, but with no regularity, whilst the muscles of the calf act rhythmically.

She is extremely nervous and hysterical; the least excitement increasing the twitchings, and causing jerkings of other muscles not ordinarily affected.

In the intervals of the attacks of the epileptic convulsions her general health is perfect; but her memory is failing. The ophthalmoscope reveals nothing abnormal. On admission, she was put in a quiet ward, and placed on large doses of potassium bromide, then of arsenic, then of nitrate of silver, etc., but without benefit. Finally, one drop of nitrite of amyl three times a day was ordered to be given by the mouth, and cautiously increased.

The first dose was given on a small lump of sugar in the morning, about one hour after breakfast. Almost simultaneously with its being swallowed the heart commenced to act violently; the respiration was hurried and labored; she gasped for breath; the face was flushed almost to lividity, and she complained of a fullness and tightness of the head, so that it seemed to her it would burst and her eyes start from their sockets. These symptoms followed each other so quickly that

there was hardly a perceptible interval between them. The pulse was very rapid,—150 in the minute,—but not lessened in force, each beat being full and distinctly felt by the fingers.

The thermometer in the axilla registered 99° Fahr.; but this increase in the temperature was doubtless due to the arterial excitement. The paroxysm lasted about one minute and a half, the disagreeable symptoms passing off rapidly. As they did so, the pulse and temperature fell to their normal position.

No feeling of exhaustion or weakness followed this stage of excitement; but the muscular twitchings, both of the neck and leg, were very much lessened. This quieting of the muscular spasms continued from an hour and a half to two hours, after which the former condition was gradually redeveloped.

The second dose, which was given just before dinner, caused the same symptoms as the first, but the third had no effect whatever; not even the slightest quickening of the pulse was produced.

The one drop was recommenced in the morning, but by degrees, as the system became accustomed to its presence, it lost all influence. Then two drops were given three times daily, each dose producing intense cardiac action and flushed face, and relieving the chorea for the time.

After a few days the larger dose began to lose its power over the jerkings, although the excited action of the heart and other phenomena were still caused by each dose.

A third and fourth time the amount was raised, until two drops were given seven times a day, making fourteen drops in the twelve hours. This quieted her completely, and while it was continued she was almost entirely free from the choreic twitchings; but the benefit was only temporary, for, so soon as one or two doses were omitted, the movements returned with equal severity.

Although the salt was given in such large doses, and continued so long, at no time were there any unpleasant symptoms beyond those already detailed. There was no diminished sensibility in any part of the body, no numbness or tingling complained of.

The amyl salt controlled the local chorea, but in the quantity mentioned did not exempt her from the epileptic attacks; although if given when a spell was about to come on it effectually prevented it.

On two such occasions two drops were exhibited, and she became at once quiet, went to sleep, rested, and next morning awoke, feeling quite well.

When under the full influence of the drug, her menses came on at the expected period. They were perfectly natural in every particular, the flow being well established, but not increased in the least, and lasted the usual time.

The pulse-rate and temperature were taken a number of times during the use of the medicine. Just after a dose the pulse ranged from 140 to 160 per minute, the temperature never exceeding 99½° Fahr.; in the interval between the doses, when not under its immediate influence, both the pulse and temperature were normal.

The urine, which was not increased in quantity, was repeatedly examined by the oxide of copper test for sugar, but never once yielded the faintest trace.

In this condition the patient left the house, thus preventing any further observations in the case.

METACHLORAL.—M. Dujardin-Beaumetz reports that he finds in metachloral a useful substitute for iodoform in the treatment of ulcers, etc. A serious objection to the use of the latter agent is found in its very persistent and insupportable odor. From this objection the metachloral is entirely free.

TRANSLATIONS.

OPERATION FOR DOUBLE HARE-LIP.—Prof. Duplovy contributes to the *Bull. Gén. de Thérapeutique* for February 28 an account of a case of double hare-lip complicated by prominence of the intermaxillary bone and division of hard and soft palate, which he relieved by resection of the septum, freshening, and suture of the bones. The patient, a little girl, presented the following appearances. The intermaxillary bone was appended to the extremity of the septum, was quite mobile, and extended in front and obliquely upwards, overlapping in front the line of the maxillary bones by about two centimetres (nearly two-thirds of an inch). It was about thirty-five millimetres broad, and bore on its free edge four small, irregularly arranged incisors belonging to the first dentition. (Dental evolution in the lower incisors had terminated six months previously.) The form of the fleshy tubercle was that of a leaflet of a trefoil attached by its smaller extremity to the nose. Two smaller portions adherent to the maxillary bones were adherent also to the *alæ nasi*. The two borders of the labial divisions widely separated and turned back exteriorly were quite thin at their free border, and became smaller towards the *alæ nasi*. Being in part adherent to the maxillary bones, they could be pulled towards the median line only with difficulty.

On opening the mouth, the separation of the maxillary bones was found much less considerable than the size of the intermaxillary. The two maxillæ were approximated, particularly in front, to such an extent as to thrust back the intermaxillary, leaving an interval between them of only twenty-five millimetres, a circumstance important from an operative point of view. The voice was nasal, the articulation poor, deglutition even of liquids was more easily performed than would be supposed.

The operation was as follows: The fleshy tubercle of the intermaxillary was separated with care, the tracts which were bound to the *alæ nasi* being cut at the same time, while the intermaxillary was supported so that the septum should not be injured; the two external incisors, which were only loosely attached, were removed. The intermaxillary was then pierced with a drill, and a double silver wire introduced, the division of which gave two sutures.

A V-shaped fragment of twelve millimetres was then removed from the base of the septum by means of curved scissors. Considerable hemorrhage occurred at this point in the operation, which, however, was successfully checked.

The intermaxillary could now be pushed back until it rested like a keystone between the other bones. The edges of the intermaxillary, as well as those of the adjoining bones, were then freshened, and the parts joined together by wires introduced through holes drilled for the purpose, the apposition of the parts being very close. The restoration of the soft parts was then accomplished by freshening the edges of the central fleshy tubercle, bringing small flaps over from the lateral portions and retaining them by means of seven twisted sutures, four lateral and three inferior; the latter, intended to unite the small flaps to the inferior border of the central tubercle and to blend their extremities, were used in connection with fine pins.

Finally, in order to prevent deformity of the nasal openings, and particularly to avoid the traction which they might exert upon the soft parts below, a long pin was run through the *alæ* and the naso-labial column, and the sides drawn together by a thread.

The result was satisfactory. Union took place along most of the bony parts, and the union of the tissues of the lip was perfect. The two deciduous central incisors

were replaced by permanent teeth, which were too badly directed for purposes of mastication, but which aided in articulation, improving the voice considerably. The former hideous aspect of the face was removed, and the girl's appearance much improved. X.

THE STATE OF THE PUPIL DURING ANÆSTHESIA.—MM. Budin and Coyne contribute to the *Archives de Physiologie*, No. 1, 1875, a communication on this subject, accompanied by illustrative cases. From their observations and researches they draw the following conclusions:

1. The administration of chloroform causes a series of modifications in the pupil which bear a relation to the state of sensibility.
2. During the period of excitation the pupil is dilated.
3. This period passed, the pupil becomes progressively contracted, remaining sensible to excitations.
4. During the period of profound surgical anæsthesia two phenomena on the part of the pupil are constantly observed: 1, an absolute immobility of this organ; 2, a state of contraction. There is a relation between the absolute insensibility of the subject and the contraction with immobility of the pupil; between the return of sensibility and the dilatation with mobility of this organ.
5. The state of the pupil may, then, from the point of view of sensibility, serve as a guide in the administration of chloroform.
6. Gradual dilatation of the pupil supervening during an operation indicates that anæsthesia is less profound, and that sensibility is returning.
7. During operations of long duration, if it is desired that the patient should be completely insensible the anæsthesia should be so managed that the pupils should remain constantly contracted and immobile.
8. Efforts at vomiting may bring about dilatation of the pupil, cause insensibility to disappear, and bring about awakening; it annihilates in part the effects of the anæsthetic.
9. It is important not to confound true chloroform-anæsthesia with asphyxic anæsthesia; the latter causes different phenomena on the part of the pupil.
10. The condition of the iris, although it may serve as a guide for the direction of anæsthesia, does not indicate the imminence of accidents. The pulse, the respiration, and the general condition of the patient must be carefully watched by the administrator of chloroform. X.

EXPERIMENTAL RESEARCHES UPON THE MODE OF ACTION OF THE MORE COMMON EMETICS.—Dr. H. Chouppé's researches (*Archives de Physiol.*, No. 1, 1875) lead him to the following conclusions:

The mode of action of the more common emetics is not the same for all, and if the phenomena which accompany or precede vomiting are closely inquired into the greatest differences will be observed.

Ipecac and its alkaloid emetine, no matter by what way they may be introduced into the organism, always provoke vomiting by direct irritation of the terminal filaments of the pneumogastrics in the mucous membrane of the stomach. Tartar emetic and antimony have a double action: they may act upon the gastric mucous membrane, but also directly upon the medulla. There are, however, differences between these two medicaments: tartar emetic acts more quickly upon the stomach than upon the medulla; apomorphine more rapidly on the nervous centres than upon the gastric mucous membrane. The best proof of this which can be given is, that the dose of tartar emetic sufficient to cause vomiting when injected by the veins must be larger than when it is introduced by the stomach. With apomorphine, on the contrary, the maximum effect is produced by injection into the general circulation. X.

PHILADELPHIA MEDICAL TIMES.

A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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EDITORIAL.

ALCOHOL IN PYÆMIA.

IT is a well-assured fact that the best treatment for snake-poisoning is enormous doses of alcohol,—as much brandy or whisky being given as the patient can drink, until some symptoms of intoxication are induced, or the patient is dead or convalescent. Putrid matters introduced into the blood in quantity produce symptoms and pathological changes strikingly similar to those of snake-poisoning, as any one can convince himself by experiments on the lower animals. It is, therefore, not unreasonable to try whether narcotic doses of alcohol might not be of use in pyæmia. Moreover, experiments in the laboratory have shown that it is impossible to induce pyæmic fever in animals narcotized with alcohol, and also that it is more difficult than usual to kill such animals with putrid injections.

We do not know whether commencing pyæmia has ever been treated in the way that is orthodox for rattlesnake-poisoning, but certainly, as pyæmia is at present almost synonymous with death, the following enthusiastic and somewhat egotistical experience of Mrs. Jane Grey Swisshelm in the *Chicago Tribune* is worthy of consideration:

"When I went into the hospital service, in 1863, I was at once confronted with the gangrene, and called publicly for 'Lemons! lemons! lemons!' Soon pyæmia followed, and then I called for 'Whisky! whisky!' Everything I asked for came in abundance; pyæmia treated externally with alcohol and water, friction and heat; internally with milk-punch, eggs, rich broths, cherry

wine, although I have had fifty struck by the premonitory chills in one night.

"Surgeons never interfered with my treatment except when I went to them for advice, and I became so confident of success that I used to say, 'If Death wants to get a man from me, he must send some other messenger than pyæmia, for I do not recognize that creation of unskilled surgeons and incompetent nurses.' Alcohol was the basis of my remedies, and 'we praised the bridge that carried us over.'"

The precepts of Mrs. Swisshelm are strongly supported by a series of papers which commenced to appear some months since in the *Deutsche Klinik* (1874, No. 45, 1875, Nos. 2 and 6). In these Dr. Theodore Clemens, of Frankfort, states that he has seen in private practice, during the last fourteen years, eight cases of pyæmia of a high grade, all of which recovered under the free administration of alcohol. He prefers red wine, of which he gives a bottle a day whenever he fears the development of pyæmia, and, so soon as chills appear, increases this quantity to as much as the patient can be got to drink. In regard to the external use of alcohol, of which Mrs. Swisshelm speaks, our readers will remember the remarkable paper by J. L. Suesseroth which appeared in this journal last year. As the result of some little experience and a good deal of reading, we have come to the conclusion that our country friend was about right, and that of all the various antiseptic dressings yet brought forward, whisky is probably the cheapest and most efficient, as it is the safest. Would it be asking too much of our surgeons if they would try alcohol without and within in almost unlimited quantities in pyæmia?

THE AMERICAN MEDICAL ASSOCIATION.—We have received from the Permanent Secretary a circular concerning the meeting of the Association on the 4th of next May, at Louisville, Ky., and closing as follows:

"Secretaries of State medical societies that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of the officers, with their post-office addresses, of those county and district medical societies entitled to representation in their respective bodies. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates.

"It will also enable the Permanent Secretary to present a correct report of the medical organizations in fellowship with the Association.

"WM. B. ATKINSON, M.D.,
"Permanent Secretary."

We have also received a communication from Dr. Busey calling attention to the rule requiring that all

papers intended to be read before the sections shall be forwarded to the officers of such sections at least one month *before* the meeting of the Association.

The sections and their committees are as follows:

Practice of Medicine, Materia Medica, and Physiology: Dr. Austin Flint, Sr., New York, N.Y., Chairman; Dr. J. K. Bartlett, Milwaukee, Wis., Secretary.

Obstetrics and Diseases of Women and Children: Dr. W. H. Byford, Chicago, Ill., Chairman; Dr. S. C. Busey, Washington, D.C., Secretary.

Surgery and Anatomy: Dr. E. M. Moore, Rochester, N.Y., Chairman; Dr. T. S. Latimer, Baltimore, Md., Secretary.

State Medicine and Public Hygiene: Dr. H. I. Bowditch, Boston, Mass., Chairman; Dr. H. B. Baker, Lansing, Mich., Secretary.

CONCOURS.—Some years since, Dr. Henry Hartsorne won the professorship at the Philadelphia High School by concours, but the method has not taken root in our soil, the climate apparently not being suited to free contests for position. It is with great pleasure that we note the re-inauguration of the plan by the faculty of the Jefferson Medical College, and we trust that its new life may be a longer one. At the recent spirited concours for the lectureship on physical diagnosis in the summer faculty of the school mentioned, there were four candidates, but Dr. Stanley Smith won the position,—a good deal, we believe, to the surprise of the medical circle especially interested in the event. As none of the competitors had achieved reputation by original research, the method of choice was unexceptionable, and we sincerely congratulate both Dr. Smith and the faculty. We do not, however, believe in the concours entirely: we are doubtful of a system which might place a man in a professorship because he was, as a lecturer, a little better than his opponent, although in other respects much inferior to him. A modified concours, in which the final judgment should be based on the published work of the candidate, his practical skill in the branch, his originality, and his trial-lecture, offers, probably, the best possible mode of selection, unless, as in Germany, there could be a gradual promotion by selection from a professorship in a lower to one in a higher school.

TRICHINÆ, according to a Nordhausen paper, have recently been found, on microscopic examination, for the first time, in the flesh of a wild boar. Hitherto it has been believed that these parasites infested the domestic pig alone.

CORRESPONDENCE.

UNIVERSITY OF STRASBURG, March 1, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In writing my first communication to your journal I shall select a subject which seems to me of the greatest importance,—namely, the possibility of *nourishment with peptones*.

Since Eberle succeeded in making an artificial digestive fluid from the mucous membrane of the stomach, many varied and careful researches have been published upon gastric digestion. The essential result of these researches goes to show that solid albuminous matter passes out of the stomach in a fluid condition and also altered in its properties. The altered albumen, called by Lehmann "peptone," is soluble in watery fluids, whatever their reaction, and does not become precipitated or otherwise altered by boiling, while other solutions of ordinary albumen, as, for instance, white of egg, coagulate upon boiling, and albumen dissolved in acid or alkaline fluids precipitates when these are neutralized. Funke first observed as a peculiarity of peptone that in a state of solution it possessed the property of diffusion through animal membranes or artificial parchment. This property is possessed in general, according to Graham's well-known researches, by those fluids only which are crystalloid in a solid condition. Peptone, however, is an exception to this rule, as in a solid form it is always amorphous. This diffusibility of peptone is therefore the more important a property, since albuminous matters either do not diffuse at all, or do so only to a slight degree, while we are obliged to believe that they reach the blood normally by diffusion. The absorption of albuminous matters into the blood is believed to occur by their first becoming changed into peptone; this is then absorbed, and after absorption becomes again changed into ordinary albumen. The process of peptone formation appears an important one in gastric digestion, and still more so in its relations to intestinal digestion, when it is considered that the pancreatic juice acts upon albuminous matter in the same way as the gastric juice.

A more accurate study of pancreatic digestion has been rendered possible since the discovery of a method of making artificial pancreatic juice, similar to that by which artificial gastric juice has been made out of the mucous membrane of the stomach. It has been found that in digestion by pancreatic juice a peptone is formed similar in all respects to that produced by the action of gastric juice. The pancreatic secretion, however, is active, whether in acid, neutral, or alkaline solutions, being more powerful under the latter condition; while the gastric juice produces its greatest effect, that is to say, the most rapid solution of albumen, in the presence of acid in the proportion of four parts to the thousand. Since, however, the acid digestive mixture of the stomach becomes altered as to its reaction upon entering the duodenum, the albuminous matters undigested by the gastric juice cease to be acted upon, but must

now be digested by the pancreatic secretion. Between the gastric and the pancreatic digestion, however, there is an essential difference. Gastric digestion is entirely completed by the formation of peptone. But, while the peptone formed by the action of the pancreatic juice upon albuminous materials differs in no respect from the former, certain crystallizable matters are formed from this peptone by longer digestion, as Kuhn has shown, matters which are essentially leucine and tyrosine.

By the further progress of the pancreatic digestion, bodies are formed which are decidedly no longer albuminous, and which, if introduced into the system, will not become such, but will either be excreted or will undergo further decomposition.

The question here arises as to whether peptones become ordinary albumen or are broken up into similar constituents, as in the case of prolonged action of the pancreatic juice.

It is the object of the present article to refer to two works which agree in appearing to solve these problems, though, indeed, I propose subsequently to bring forward other researches upon the purely practical side of the question.

There are certain diseases in which, for very intelligible reasons,—e.g., on account of perfect occlusion of the œsophagus,—nourishment can be administered only by the lower intestine. When such nourishment is supplied by means of albuminous bodies, these play an important part, and it becomes a question of moment how we can best bring about the absorption of this material.

The first and simplest question is, Can the intestine absorb to the least extent unchanged albumen if only this is in a soluble form, as, for instance, white of egg, or is this impossible?

While many experiments upon animals appear to indicate that such absorption does take place, yet all these results are rendered negative, or opposed, at least, by the fact that it is impossible to obtain a portion of normal intestinal mucous membrane in a living body which does not secrete digestive juice. Under these circumstances the albuminous material may easily be changed into peptone before absorption. Even though this is the case, it is necessary, in order to be successful in the attempt to give nourishment by this means, that in practice we should, instead of mere albumen, use a so-called digestive mixture. That is, we must use a mixture of some albuminous body, as, for instance, flesh, with artificial pancreatic juice, in order that the formation of peptone may be more rapid, and, consequently, that absorption may take place more quickly. It is still more simple if the albuminous body is absorbed as a peptone, or if the peptone becomes converted into albumen after absorption it is still more simple to make use of peptone directly, and thus to save the sick body the labor of making the change. From this point of view, the question whether the sick or convalescent should be nourished per anum or per os, and the purely physiological question whether peptone after absorption becomes

converted into albumen, must approach each other closely.

Although these questions had not been decided experimentally one way or the other, yet Leube some years ago succeeded in nourishing sick persons with peptones in practice. The necessary peptones for this purpose were obtained artificially only with great difficulty, and it was only possible to get the remarkable peculiarities of the albuminous bodies by heating them in a Papin's digester, with water, to a temperature of 212°, in order to dissolve them and convert them into peptone. By acting upon flesh in this manner, Leube procured a preparation which he found of the greatest use in a number of cases.

While these purely practical results in the case of human beings were not contradictory to, but, in fact, in support of, the possibility of the metamorphosis of peptone, it was important to get an exact explanation of the question by extending these researches to animals. Such researches were undertaken almost simultaneously by Plotz, in Buda-Pesth, and Maly, in Innsbruck. The researches of these investigators were, fortunately, supplementary to each other, Plotz having experimented upon the dog, and Maly upon the pigeon. In a dog ten weeks old, and weighing 1302 grammes, Plotz ascertained (*Pflüger's Archiv*, Bd. ix. s. 323) the amount of milk ingested daily, and also the proportion of albumen, fat, and salts contained in the same. After the amount of nourishment necessary to support the animal had been ascertained, an artificial fluid nourishment was prepared, containing similar proportions of peptone, butter freed from albumen, grape sugar, and salts. The animal was fed with this fluid, which was injected into the stomach by the aid of a catheter five or six times a day. The peptone was represented by fibrin digested with gastric juice. While on milk diet, the animal took 520 cm. daily, gaining in three days 33 grammes in weight. One hundred centimetres of the milk contained 9.06 grms. solid matters, including 3.35 grms. albuminous, 2.21 grms. fatty, and 0.47 gm. saline. One hundred centimetres of the artificial food contained 5.0 grms. peptone, 5.0 grms. grape sugar, 3.0 grms. fat, and 1.2 to 1.5 grms. salts. The respective proportions are thus seen to differ considerably in the latter case from those ascertained in the case of the milk, and this difference is most marked as regards the salts. The high proportion of this constituent is connected with the condition of the peptone, and, according to Plotz, could only be diminished with great trouble.

Later, the nourishing fluid was made more concentrated, so that 100 centimetres contained 8 grms. peptone, 8 grms. sugar, and 6 grms. fat. During the eighteen days of the experiment, the dog received 567 grms. peptone, 422 grms. sugar, and 309 grms. fat.

During two days it was attempted to nourish the dog on peptone alone; but the occurrence of vomiting and diarrhœa made it necessary to return to the use of the complete fluid. These disturbances excepted, the dog nourished well during the whole course of the experi-

ments. All the functions appeared to be normally performed, peptone appearing neither in the stools nor in the urine. The weight of the animal rose during the course of the research from 1335 grms. to 1836 grms., an increase of 501 grms.

This increase can, however, only be explained by the supposition that the peptone entirely supplants the albumen as regards all the functions of nutrition.

Before Maly (*Pflüger's Archiv*, Bd. ix, s. 585) attempted any researches upon the nourishment of animals, he wished to make a comparison between the chemical composition of peptone and that of the albuminous matters from which it was formed. To this end he bestowed particular care upon the cleansing of the fibrin the digestion of which was to produce peptone. The peptone also was for the most part freed from its essential contamination of salts, which in Plotz's researches had made itself noticeable in a disturbing manner. The salts belonged to the peptones as a result of the method of their preparation from the nourishing fluid, and were separated by Maly by the aid of diffusion. It appeared that in a mixture of salts and peptones the first diffuse so much more rapidly that a separation of the two may be effected without an appreciable loss of peptone. The elementary analysis of the cleansed fibrin, and of the peptone therefrom derived, resulted in showing so little difference as to the elementary composition of these substances that peptone is not to be looked upon as proceeding from a further chemical decomposition of albumen.

Maly made use of pigeons in his experiments, on account of their cleanly habits and the ease with which they can be fed with measured quantities of nourishment. A pigeon was fed with wheat of a known chemical composition to such an extent as just to maintain the "vital equilibrium;" that is to say, it was managed that the amount of nitrogen taken into the body should precisely equal that which was excreted. The pigeon was then fed with pellets containing known quantities of a mixture of similar composition to that of the usual food, excepting that peptone was substituted for the albuminous matter.

Many carefully conducted experiments upon pigeons in which feeding with wheat was alternated with the administration of peptone pills showed that under the use of the latter the body-weight not only held its own, but increased. This could only occur from the fact that peptone was more readily absorbed by the intestines than albumen. At all events, peptone is an albuminous nourishment for pigeons, or, in other words, is a reconstructible and organizable product of digestion.

The practical conclusions which can be immediately drawn from these experiments are the following:

It seems possible that in case of sickness a certain amount of work in the alteration of albumen may be spared the body by its partial nourishment, at least, per anum. In what manner this may best be accomplished in any given case these physiological researches do not indicate.

DR. E. TIEGEL.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 28, 1875.

THE PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Chylous fluid from a hydrocele.

DR. JAMES TYSON presented a specimen of milk-white chylous fluid, sent to him for examination by Dr. C. H. Mastin, of Mobile, Alabama. Six and a half fluidounces of the fluid were removed by Dr. Mastin, by tapping, from a hydrocele, which he describes "as distinct, and on the front part of the testis, just below where the cord emerges from the gland."

On examination, Dr. Tyson found the fluid alkaline, specific gravity 1015, and highly albuminous, becoming almost solid on application of the tests. Microscopic examination revealed a molecular base, some leucocytes, and a smaller number of oil-drops. The suspended portion was almost completely soluble in ether, and there remained a cream-like fluid on evaporation of the latter.

In the Transactions of the Pathological Society of London, vol. xvi. p. 184, is reported a case referred to by Holmes in his System of Surgery. This fluid was milky from the presence of fatty matter.

Bardeleben gives the analysis of a similar fluid from a hydrocele, reported by Vidal. The fluid resembled a fat emulsion or milk, was without odor, saline in taste, and alkaline in reaction; specific gravity 1010, not coagulable by heat or acetic acid alone, but by the action of both coagulation ensued. After adding chloride of sodium, a clear fluid was obtained by filtration which was also coagulable by heat, by numerous acids, sulphate of copper, and alcohol. Treated with ether, so much fat was dissolved that it was possible to form butter. The presence of sugar was revealed by Trommer's and the yeast test; sodium-chloride and lime were found, but no phosphoric or sulphuric acid.

Vidal called this case *galactocoele*; but Dr. Tyson thought the term *chylous* was at least more suitable for the specimen he presented, since it exhibited all the elements of chyle, including the leucocytes or chyle-corpuscles, of which, however, no mention is made by Vidal.

The PRESIDENT said that it was an interesting fact that nearly all instances of chylous fluid in serous cavities occurred in the *tunica vaginalis testis*. He was not aware of any peculiar relation between the tunica and the lymphatics which would account for the presence of chyle in this situation and not in other serous sacs. The microscopical and chemical examinations show that it is not the result of any grave inflammatory action. There is something still unexplained in relation to the matter, quite worthy of investigation.

Extensive subcranial extravasation, which complicated a fissured fracture of the skull.

DR. RICHARD A. CLEEMANN presented the specimen, and read the following history:

"Through the courtesy of Dr. Tyson, the pathologist to the Hospital of the University of Pennsylvania, I am enabled to show the Society this specimen of traumatic subcranial blood-clot, from a patient who came under my care before his removal to the hospital.

"The subject of the accident was a sailor, 20 years of age. While coming up the river Delaware in a schooner, at 7 A.M., November 30, 1874, he was struck by a block (a heavy piece of wood bound with iron) attached to the jib-sheets. He was unaware of being unconscious

from the blow, though a fellow-sailor afterwards recalled seeing him on his knees; but he could have been stunned but for a very short period, since the captain of the vessel, his father, who was on the after-part of the deck at the time, did not know till an hour afterwards that any accident had occurred. About 10 A.M. the injured man lay down, complaining of pain in the head and vomiting; and in the afternoon I saw him on the vessel, then attached to the wharf. These symptoms still continued, with a feeling of lightness in the head, but he was perfectly conscious and without paralysis. There was tenderness over the right side of the head anteriorly, and a little fullness was observed, but no depression of bone could be anywhere discovered. Ten grains of calomel were ordered, which were to be followed by a dose of sulphate of magnesium. Perfect quiet was directed, and an unstimulating diet.

"I saw the patient the next day about noon. He was now lying on his left side, curled up on the seat of the cabin, and seemed to be made uncomfortable by any attentions paid to him. His father said he could only occasionally cause him to speak, but he would open his eyes, which he kept closed, when told to do so, and, at my request, turned his head from one side to the other. He had been found in the morning at the side of the vessel, where he had gone to evacuate his bladder, a portion of the urine having wetted the deck. I understood at the time that his bowels had not yet been moved, though afterwards I was told that he had had an involuntary evacuation. I now considered him to be in the condition of 'cerebral irritation,' as described by Mr. Erichsen, and, recognizing the likelihood of subsequent cerebral inflammation, and the disadvantages of his residence on the vessel in that event, it was decided that he be removed to the Hospital of the University of Pennsylvania, about a quarter of a mile distant. While I was at the hospital, whither I went at once to make arrangements for his admission, I was hastily summoned back to the vessel on account of an alarming change in my patient's condition. I found him lying on his back on the floor of the cabin, comatose, and suffering one convulsion after another. These spasms were tetanic in character. Suddenly the lower limbs would be rigidly extended with the feet pointed, while the hands and arms would be stiffened and flexed, and in the severer attacks the muscles of the spine would be affected to the degree of producing marked opisthotonos. The respiratory muscles were also involved, at times to the extent of producing mucous rattling in the trachea, frothing at the mouth, and accumulation of secretion in the nose, these symptoms being followed by an approach to stertor in the breathing, which feature, however, was very transient. Borborygmi were heard in the intestines, but accompanied by no involuntary discharge. The pulse, in the intervals of the convulsions, counted sixty beats in the minute, and was oppressed in character. Under these circumstances I opened a vein in the right arm, and observed with interest that the prick of the lancet was followed by the motion of withdrawal of the limb. The blood spurted freely till ten ounces had been lost, when the vessel collapsed. This measure was undertaken, not in the hope of cutting short the convulsions, but as a temporary resource, with the view of diminishing vascular tension, that the cerebral congestion consequent on the muscular disturbances might do less injury. The pulse was more free afterwards, though the number of beats to the minute was not altered. The hospital ambulance, though momentarily expected, did not, through a misapprehension of the driver, arrive for the patient, who thus remained two hours longer on the vessel. During the five hours the convulsions continued; then the man, who had been lying in folded blankets merely, and in a corner of the overheated

cabin, was placed on a soft bed, exposed to a current of fresh air, when the spasms ceased; which sequence allows the inference that they were reflex in character, excited by his uncomfortable position. Finally, he was carried on a stretcher to the hospital. The journey, though short, was a severe one, for the day was very cold, and the way lay across three vessels floating at different heights, and over undulating and broken ground. Whether from these causes or not, the man was repeatedly convulsed during the transit, so that when he was placed in a bed in the ward his condition seemed far worse than before. His skin was now very hot; face somewhat livid, breathing labored, though not stertorous, and pulse 120. I detected no paralysis of the limbs, but the pupils were widely dilated.

"The case now passed from my care, but I learned that the man died ten hours after admission, his condition becoming worse and worse.

"The *necropsy* was made by the house-surgeon, the head only being examined. A fissured fracture of the skull first presented itself. This fracture, as I saw it delineated on a prepared skull, extended from near the summit of the frontal bone, on the right side, running not far from and apparently parallel to the coronal suture, which it crossed low down, into the right greater wing of the sphenoid, where it divided into two arms, one of which penetrated the lesser wing of the same side. Higher up a branch had been given off, extending forward through the frontal, and another downwards and backwards into the squamous portion of the temporal bone. Examining the cranial contents, a large blood-clot, five inches in diameter and more than an inch thick, is seen, covering, with the exception of a small portion posteriorly, the whole of the dura mater, which corresponds to the right anterior lobe of the cerebrum. The arachnoid cavity is free from blood; the vessels of the pia mater intact, the cerebrum, except the depression caused by the clot and the post-mortem staining, normal. Removing the clot, the larger vessels beneath are found uninjured, as was to have been expected from the late occurrence of the symptoms of compression.

"This case is in accord with the conclusions of Mr. Callender, that rapid death from coma without paralysis is the usual consequence of effusions about the vertex, but it differs from the general rule in the super-vention of convulsions.* It is interesting to note, however, that in Mr. Callender's cases of extravasation into the brain-substance, the spasms were observed, as a rule, when the lesion, which was accompanied with left-side paralysis, was in the *right anterior lobe* of the cerebrum exterior to the optic thalamus and corpus striatum.†

"It is exceptional that so severe an injury as the one recorded should have been received without appreciable loss of consciousness. That this symptom, when secondarily developed, did not make its appearance till thirty hours after the accident, is to be explained, most probably, by an issue of blood so slow that the brain was for a time able to accommodate itself to the disturbing effects of the extravasation.

"As to the question of the use of the trephine in the treatment, this appears to have been one of the rare instances where its use would have been entirely justifiable. The accurate knowledge of the part struck indicated the probable site of injury, while the slow approach of coma and the absence of paralysis seemed to designate an extravasation without the brain-substance proper.

"The post-mortem examination revealed no contra-indications. The consideration of the measure, how-

* St. Bartholomew's Hospital Reports, vol. iii., 1867.

† *Ib.*, vol. v., 1869.

ever, was deferred on the vessel, on account of the more favorable conditions for the performance of the operation in the hospital; the delay in the transmission there of the patient not being anticipated."

Dr. JAMES TYSON said he was reminded, by Dr. Cleemann's case, of another on which he had made the post-mortem examination, which was striking in its parallelism in some points, while in certain other respects it was essentially different.

The case was that of a gentleman about 60 years of age, much addicted to the use of alcohol, who fell upon the ice, walked several squares to his house, and retired to his room. He was in the habit of remaining in his apartment for days at a time, and a similar course at this time did not attract any attention. At the end of thirty-six hours, however, his room was entered, and he was found unconscious and in a dying condition. He was dead when Prof. F. G. Smith, who was called to attend him, entered the room.

There was total ignorance as to the cause of death, and a post-mortem examination was requested with a view to its determination. On inspecting the body, the fingers were found tightly flexed upon the palms, whence it was inferred that he had died in a convulsion. On removing the calvaria and opening the dura mater, a huge clot was found *beneath* the latter, and covering the whole of the anterior half of the right hemisphere, depressing it decidedly, and extending down beneath the base of the brain. *There was no fracture of any portion of the skull.*

THE PRESIDENT asked whether there were any evidences on the scalp or tissues beneath which would indicate that the patient had in falling struck his head with violence. It is not improbable that in cases where the walls of the blood-vessels are much diseased, a spontaneous rupture might occur so as to occasion a clot in that position. Hemorrhage into the arachnoid or sub-arachnoid space is not very rare, and, in a large proportion of the cases where he had himself met with it in adults, had been associated with chronic intemperance. The symptoms which characterize meningeal hemorrhage are quite peculiar, and it is possible that at the moment of the hemorrhage a person should fall, but afterwards be able to rise to his feet and find his way home. It is interesting, therefore, to learn whether any evidence was found of such an injury caused by the fall as might have produced this hemorrhage, either by direct violence or by counter-stroke.

Dr. TYSON said there were no evidences of contusion of any part of the scalp or subjacent tissues.

Dr. CLEEMANN remarked that the case, in connection with his own, illustrated admirably the conditions under which trephining might on the one hand be of service, and on the other clearly useless. Thus, in Dr. Tyson's case the position of the clot beneath the dura mater permitted the blood to pass down beneath the brain, so that even if the seat of hemorrhage was reached by the trephine, the operation would avail nothing. But in his own, the clot being external to the dura mater, and therefore circumscribed, its removal was quite within the range of possibility.

He desired to know of Dr. Tyson whether there was any breach of continuity in the brain-substance, as is usual when convulsions occur in like cases. He thought that the convulsions in his own case were evidently of a reflex nature, caused by the uncomfortable position of the man as he lay in the cabin. He thought the brain was in that condition in which it was exceedingly susceptible to irritation, and that under these circumstances the patient would be thrown into convulsions from comparatively trifling causes. He took much interest in these phenomena of the case, from their resemblance to those of certain cases of puerperal convulsions, in which, the brain being already in a state of irritability

from the presence of serum constituting an œdema, as it were, the slightest external irritation would excite a convulsion of great violence.

Dr. TYSON replied that the brain was evidently compressed in this case, but there was no breach in the integrity of its structure.

Soft cancer (encephaloid) of the kidney and of the lumbar glands(?).

Dr. TYSON also presented a specimen of encephaloid of the kidney, removed from a farmer aged 52 years. The case first came under his observation about eighteen months ago, as one of hæmaturia. The hæmorrhage had first occurred in the spring of 1873, but for four years previous there were frequent attacks of lumbar pain, which were at first attributed by the patient and his friends to lumbago. They were, however, periodical, and often of extreme severity, and he had actually once passed a small stone, which, from the description of a highly intelligent person who saw it, would appear to have been a mulberry calculus. With these facts before him, Dr. T. was not slow in deciding that the case was one of impacted calculus, although the blood was copious, and there were sometimes coagula. The urine was, of course, highly albuminous, but a microscopic examination, made in August, 1873, revealed no casts. After he came under observation the hæmorrhages remained absent for as much as four weeks at a time, but gradually became more frequent, as did the attacks of lumbar pain, which finally became continuous and extreme. The patient gradually became weaker and lost flesh, notwithstanding supporting treatment. Œdema of the right leg appeared, and subsequently extended to the left, and by Christmas, 1873, he was entirely confined to bed. Dulness was now apparent over the region of the right kidney, and the real nature of the disease was suspected, although before this the presence of incontinence of urine also led to the suspicion that the bladder might be involved, a symptom entirely explained by the condition of the spinal cord found post mortem.

He lingered, requiring the constant use of opiates to subdue the pain, until about October 23, when he died.

The post-mortem examination was made by Dr. Hunsberger, of Blandon, Berks County, Pennsylvania, who kindly forwarded the specimens. They consisted of the bladder, two kidneys, and a portion of the tumor. The former organ appears to be healthy, but the left kidney is enlarged, while the right is converted into a trabecular connective-tissue frame-work, the interstices of which are occupied by the usual brain-like substance of soft cancer. The proper situation of this organ was occupied by a large tumor, extending down to the crest of the ilium and eroding the bodies of three or four lumbar vertebræ. Sections of the portion of the tumor sent were made, and found to present the microscopical characters of encephaloid or soft cancer. Pushed up to this tumor, and lying in contact with the stomach, to which it was adherent, was the right kidney, presenting the characters described.

The lungs and liver were the seats of secondary deposits.

A most interesting question in connection with the case is the relation of the large tumor encroaching upon the vertebræ and the cancer of the kidney. The history of the case would seem to point to the former as primary, but it is much to be regretted that the examination did not determine the exact seat of its incipency.

THE PRESIDENT said the specimens recalled a case which he had had the opportunity of watching several years ago, in the person of a young man of healthy family history. The lumbar tumor was on the left side, and to it the kidney was closely attached; but, while its ureter was somewhat compressed, the substance of the

kidney was not actually involved by the disease. In this case the periodical character of the lumbar pain was so marked and so extreme as to lead, during the earlier period of the case, to the suspicion of aneurism, although other symptoms of aneurism were wanting. It, however, ran the same course as Dr. Tyson's case, terminating in paralysis and œdema of the lower extremities. There was no abnormal condition of the urine. The right kidney was healthy; the left was flattened and adherent to the lumbar tumor. Its ureter was constricted by adhesions, and the kidney somewhat sacculated in consequence. The mass proved to be a soft cancer of the vertebral glands. The vertebræ were eroded, and prolongations of the growth had extended through the foramina into the spinal canal, and the spinal cord was compressed and softened in its substance.

It is well known that cancer of the kidney is rare, and that changes in the urine are uncertain and inconstant. He had happened to meet several cases of cancer of the kidney which ran their entire course without marked changes, without hæmaturia, albuminuria, or peculiar cells in the urine. In other cases, again, there is the presence of albumen, more or less characteristic cells are found in the urine, while marked attacks of hæmaturia form a very important symptom.

REVIEWS AND BOOK NOTICES.

LECTURES ON DISEASES OF THE RESPIRATORY ORGANS, HEART, AND KIDNEYS. By ALFRED L. LOOMIS, M.D. New York, William Wood & Co., 1875.

The book before us is from one point of view a good one. It is clear in style, conventional in arrangement, very definite and practical in its teachings,—a valuable book for students and for practitioners of a certain class.

Yet after careful examination we fail to find in its pages adequate reason for its publication,—intrinsic *raison d'être*. Its style, though clear, is inferior to that of many recent writings on kindred subjects; the arrangement of topics, though more or less like that usually adopted, is in no way better, and is open to objections on logical grounds: thus, phthisis, which in all its forms is regarded by the author as inflammatory, is not placed in its proper order among or after inflammatory diseases of the lung-tissue proper, but after pleurisy, and the consideration of a pathological new formation, cancer of the lung, is interposed between pulmonary congestion and pneumonia. The descriptions of diseases are excellent, and show patient clinical study and extensive reading; but the parts on morbid anatomy are far from thorough, and have a gotten-up-for-the-occasion appearance by no means satisfying to the anxious inquirer; there is also a disdain of authority in therapeutics which savors of dogmatism. Indeed, reference to authority does not often divert the author from the thread of his narrative, contrary to our expectations in a volume whose pages are almost, if, indeed, not wholly, guiltless of original observations. True, the name of Dr. Bright appears in connection with diseases of the kidney, and those of Virchow and Dr. Stewart with their classification; yet it seems to us that *Dixi* would have been no very inappropriate legend at the foot of the final page. The students to whom this book will be most valuable are those who attend the author's lectures, for in it they have, as the preface tells us, a complete shorthand report, and will thus escape the drudgery of note-taking; those practitioners whose shelves are scantily supplied with modern books on general medicine will find this a clever monograph on the special subjects.

The terms "*croupous*" and "*lobular pneumonia*" are

retained, in spite of their inaccuracy and the fact that the former suggests an analogy to pseudo-membranous croup which is not established, whilst the latter has been a source of dire confusion to several generations of writers on pneumonia.

Hay-asthma is clipped of its outward flourishes in seven lines of large type.

A list of remedies for the sweats of phthisis seems to us incomplete when it fails to include atropia, which, though not well borne for any length of time, may often be given with certainty of success in advanced cases, when other means have lost their power, and when even a temporary relief from this harassing symptom is a great boon to the patient.

A few instances of careless proof-reading meet the eye; such as *nitrate of amyle*, p. 427; the omission of a comma in the third line after the heading *Prognosis*, p. 101, which gives rise to a startling perversion of the sense; and the calm statement that, in pneumonia, "Among the symptoms which may be regarded as unfavorable is a temperature exceeding 1058 F.," p. 159.

To the last the most frisky of physiologists will doubtless at once accede without experimental confirmatory proof.

The mechanical work is worthy of all praise.

J. C. W.

GLEANINGS FROM OUR EXCHANGES.

MEANS FOR RELIEVING CHRONIC PHTHISIS.—Dr. James Little contributes to the *Dublin Journal of Medical Science* for January an article "on the means most generally useful for relieving the cough, sweating, and dyspepsia of chronic phthisis." For the relief of the second condition, five grains of Dover's powder administered at bedtime will check phthisical sweating more frequently than any other remedy. Next to it is atropia or its sulphate, best given in the form of pill $\frac{1}{100}$ to $\frac{1}{80}$ of a grain. To prevent the great discomfort of the damp night-dress, Dr. Little advises a large loose night-dress of fine flannel.

For the relief of cough Dr. L. advises a mixture of morphia, atropia, hydrocyanic acid, and syrup of wild cherry. When the expectoration is very tenacious, this mixture does not suit so well as one containing small doses of iodide of potassium with bicarbonate of sodium, hydrocyanic acid, and compound tincture of chloroform. To this, small doses of tincture of opium may be added. This mixture may be taken at short intervals, and continued until the expectoration becomes easier.

In cases where great distress arises from the pain produced during violent coughing by the stretching of old pleuritic adhesions, the play of the diseased lung may be limited by adhesive straps. Dr. Little has used with success strips of dimity five inches wide, and long enough to extend from sternum to spine. One or more may also be drawn across the shoulder, from the interscapular region behind to the mammary in front. Thus supported, the chest-walls are no longer injured by the concussion of the cough, and the greatest relief follows. Chloral to the amount of ten grains in each dose of an opiate cough-mixture will render the effect more immediate and permit a smaller quantity of opiate to be employed. Chloral lozenges are also useful in the case of consumptives who are still going about. In the dyspepsia of phthisis, where there is simply an utter loss of appetite, the only combination which seems to give relief is that of strychnia with phosphoric or hydrochloric acid. It may be given in infusion of columbo or of orange. When, with loss of appetite, there is a feeling of load after food, a dessertspoonful of pepsin wine, with ten minims of hydrochloric acid in a little water after a meal, usually relieves. In pain, flatulence,

cough, and vomiting after meals, tonics and cod-liver oil must be given up for the time, and a regulated and rather spare diet, together with counter-irritation to the epigastrium, must be employed, together, if necessary, with some of the aperients which act upon the upper part of the intestinal tract and some of the medicines which are good against gastric catarrh.

COLD-POWDERS.—Dr. Beard has for some time been using a "cold-powder," the composition of which is as follows: camphor, five parts; dissolve in ether to the consistence of cream; then add carbonate of ammonium, four parts; opium-powder, one part.

Mix, and keep in tightly-corked bottle. The dose is, of course, regulated by the opium, and ranges between three and ten or fifteen grains. He has been accustomed to prescribe it for his friends by the finger-nailful, or as much as can be put on the finger-nail.

This powder may be taken in a little water just before retiring, by preference, or at any hour of the day, whenever there is a *suspicion of having caught cold*. If need be, a moderate dose may be taken several days in succession.

The advantages of this powder are said by Dr. Beard to be:

1. The taste is agreeable, or at least is not disagreeable. Even the bitterness of the opium is mostly neutralized by the camphor and ammonia. No child objects to it.
2. It is singularly and inexplicably efficacious. He believes it to be more efficient than Dover's powder, and incomparably more agreeable. In some cases it produces gentle perspiration; in others, its effect is not observed.

POISONING BY ACONITE.—At a recent meeting of the New York Pathological Society, Dr. Blake related the case of a lady who had taken, by mistake, internally a drachm each of tincture of aconite and chloroform. In the course of half an hour all the contents of the stomach had been evacuated by the stomach-pump. Within fifteen minutes of the accident, the characteristic symptoms of the poison appeared. She became insensible; pulse and respiration ceased. Life was maintained for three hours by the use of a powerful battery, and by the employment of oxygen gas, mixed with equal parts of air. At the end of three hours the pulse began to be faintly perceptible. The urine was found loaded with albumen, and containing fragments of casts. This was at first supposed to indicate a chronic disease of the kidney, but later nothing abnormal was observed in the urine. The patient recovered. The possibility of the kidney-trouble being merely temporary, and occasioned by the irritating effects of the poison, was strengthened by the fact that the skin was profoundly impressed, there being a static congestion of its surface, and the cuticle peeling off on being rubbed.—*New York Medical Record*.

HYPERTHERMIA IN RHEUMATISM SUCCESSFULLY TREATED BY THE COLD PACK.—Dr. Stewart Lockie reports (*Lancet*, February 13) a case of acute rheumatism under his care, in which the temperature rose to 104° on the tenth day, 103.6° on the eleventh, and 106.8° on the evening of the twelfth. It was then determined to attempt to reduce the temperature by the application of cold. A vessel of water with lumps of ice in it was brought to the side of the bed, water-proof sheeting was placed below the patient, and sheets wrung out of the ice-water were wrapped around the body, the sheets being wrung out every few minutes as they became warm. A teaspoonful of brandy was administered every quarter of an hour. At the end of fifty minutes the temperature had fallen to 99.6°, when she was taken out and put between blankets. She fell asleep soon after, and when she awoke, half an hour

later, the temperature was 97.8°. Two hours later it had fallen to 96°. It then rose, and during the subsequent days of the patient's illness never (excepting once, when for a few hours it attained 104°) rose above 102.2°. No further cold applications were used, and the patient made a good recovery.

FOREIGN BODY IN THE BRONCHUS (Dr. Woolverton: *Boston Medical and Surgical Journal*, March 4).—A sailor, while smoking a short clay pipe as he lay in his hammock in an intoxicated condition, fell to the deck, a distance of five feet, sustaining various contusions. Immediately after the fall he had difficulty of breathing for fifteen or twenty minutes, and, although very drunk, screamed with pain, and put his hand over his sternum. During the next four days he complained of cough which "hurt" him, and tenderness about the inferior angle of the scapula. Mucous râles over left side, but respiration free throughout. On the fourth day he ejected during a violent paroxysm of coughing a piece of clay pipe-stem three-fourths of an inch long. He recovered without untoward symptoms.

MISCELLANY.

HIGH, LOW, JACK, AND THE GAME-O'PATHY.—Who is to decide, and how is it ever to be decided, when doctors disagree? The Jack regulars call all Homœopaths quacks; the High call the Low-dilutionists mongrels. Is it any wonder, then, that the Jacks have all the government and state pickings, while the Homœopaths are left out in the cold to fight among themselves? And yet there is as great a difference between the High and Low potency men as there is between the Lowpathics and the Allopathics. The High are Symptom-atologists; the Low are Pathologists. The High give a dose every one or two weeks, and placebo the case through; the Low give a dose every half-hour or hour, and, if characteristic of the disease, cure their patient quickly.—*The U.S. Medical Investigator (Homœopathic)*.

A DOCTOR was called in East Hartford to a man, age 66, who was excessively rheumatical. "How long have you had it?" said the doctor. "Forty years," responded the sufferer. The doctor left without prescribing. We cannot tell how much we should like to see even a partial list of the remedies to which, during his life, our Connecticut martyr has probably resorted. He has carried a roll of brimstone in his left pantaloons pocket; he has carried a bit of magnetized iron in his right ditto; he has floated, so to speak, in pain-killer; he has put his trust in "cam-fire," and likewise in pacificum. Whatsoever things are hot or bracing, or tonic or rubefacient, he has resorted to; to the "king of pain," to the "ready and rapturous relief," to oils, to ointments, to poor man's porous plasters, to red flannel shirts, to galvanic braces, to opodeldoc, to herbs, and roots, and seeds,—to all things which grow or flow, which are dug from the bowels of the earth, which are extorted from crucibles, which drop from retorts, which are rosy or pale in apothecaries' bottles; to powders, to tinctures, to decoctions, to pills, to essences, to panaceas, and to elixirs; to boluses, and globules, and infinitesimal dilutions; to hot rum and water, to cold gin and

sugar, to brandy plain, to sweats and to starvation, to flesh diet and to fish diet and to fowl diet,—and all in vain.—*Tribune*.

GRADUATES IN MEDICINE.—The graduates in medicine of the nine universities of Prussia, Germany, are compelled by law to present themselves before a "State Board of Medical Examiners" for examination before they can be licensed to practise medicine in that State. This same law exists, and is rigidly enforced, in the other States of the German Empire; likewise in Austria, France, England, and in nearly all of the other prominent countries of the world, with the exception of the United States of America.

The following table shows the result of the examinations in Prussia during the past year, and conveys also an idea how rigid these examinations are, for about twenty-five per cent. of the candidates were rejected; and we might further add that no candidate is allowed to go up for examination unless he can prove by certificates that he has attended at least eight courses of medical lectures,—equivalent to four years' study:

1873-74.			
Universities.	No. of Candidates.	Passed.	Rejected.
Berlin,	124	89	35
Bonn,	39	33	6
Breslau,	37	32	5
Göttingen,	34	32	2
Greifswald,	81	61	20
Halle,	63	49	14
Kiel,	21	18	3
Königsberg,	45	25	20
Marburg,	33	30	3
Total,	477	369	108

The sum total of physicians licensed in the whole German Empire for the year 1874 is only 660.

During the same year the innumerable medical colleges of the United States of America graduated three thousand students.

In conclusion, we add, for comparison, the following table:

1874.		
Country.	No. of Inhabitants.	Practitioners licensed in 1874.
Germany,	42,000,000	660
United States,	40,000,000	3,000

Further comment is unnecessary.—*Canada Lancet*.

FOR CLEANING BRASS.—Finely-rubbed bicarbonate of potassium mixed with twice its bulk of sulphuric acid and an equal quantity of water will clean the dirtiest brass very quickly.

THE Central Middlesex (London) coroner has caused a great excitement by insisting upon an inquest of the late Sir Charles Lyell.

NOTES AND QUERIES.

PORT GIBSON, MISS., March 20, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

I was called, a few days ago, to see a negro girl who was suffering from epileptic fits. She had been delivered three or four weeks before of a fine

healthy child, of the ordinary size, and did well till the attack of the fits. She was only twelve years and four months old at the time of her delivery, is well grown for her age, and, as I learned from her mother, had menstruated only once before conception,—a very remarkable case of early maternity.

R. G. WHARTON.

A STATED meeting of the Northern Medical Association of Philadelphia will be held at their hall, 603 Fairmount Avenue, on Friday evening, April 9, at 8 o'clock.

Subject for discussion, Catarrhal Pneumonia following Collapse of Lung: to be introduced by Dr. Edward R. Stone.

The medical profession are cordially invited.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE next conversational meeting will be held at the hall of the College of Physicians, Wednesday, April 14, at 8 o'clock P.M.

Dr. W. B. Atkinson will read a paper on "Chloral."

The medical profession in the city are cordially invited to be present.

OBITUARY.

DIED at Easton, Tuesday, March 16, Dr. CHARLES C. JENNINGS.

Dr. Jennings was born in a small town about twelve miles from Bridgeport, Connecticut, in 1806. At the age of fourteen he began teaching school, and continued in that vocation until he was eighteen, when he commenced the study of medicine at Philadelphia. In 1840 he commenced practice at Riegelsville, Pennsylvania, but in 1850 moved to Easton, where he practised continuously to the time of his death. From 1861 to 1865 he was postmaster of the city.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The reply which I hereby offer to a communication in your last issue respecting an article which I read before the Philadelphia Medical Society, entitled "A Case of Purpura Hæmorrhagica requiring Transfusion," is simply this. In accordance with a request from the Secretary, I consented to read a paper bearing the above title. Those who were present and heard it read will undoubtedly bear testimony to the fact that the article was given strictly in accordance with the title, and also without referring in the least to credit for operative procedures which did not belong to me. I presume that those who know me will bear testimony that it is not my disposition to arrogate to myself a notoriety based upon the talents or work of others, and in this report of a very interesting case it was my object more to describe the condition requiring the operation of transfusion than the operation itself; judging that the latter would form the subject of a paper by Dr. T. G. Morton, as a report of an additional case to the many upon which he has so successfully operated.

Respectfully,

J. M. BOISNOT.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM MARCH 23, 1875, TO MARCH 29, 1875, INCLUSIVE.

GRAY, C. C., SURGEON.—When relieved by Assistant-Surgeon Jackson, assigned to duty as Post-Surgeon at Fort Brown, Texas. S. O. 52, Department of Texas, March 22, 1875.

WHITEHEAD, E., ASSISTANT-SURGEON.—Granted leave of absence for one month on Surgeon's Certificate of Disability. S. O. 52, c. s., Department of Texas.

HOFF, ALEX. H., ASSISTANT-SURGEON.—Relieved from duty at Fort Columbus, New York Harbor, and to take station in New York City during his duty with the Army Medical Board. S. O. 50, A. G. O., March 24, 1875.

DE WITT, C., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 37, Department of the South, March 22, 1875.

ADAIR, G. W., ASSISTANT-SURGEON.—Assigned to temporary duty at Ringgold Barracks, Texas. S. O. 52, c. s., Department of Texas.

JACKSON, D., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Duncan, Texas. S. O. 52, c. s., Department of Texas.

WIGGIN, A. W., ASSISTANT-SURGEON.—Died at Fort Stevens, Oregon, March 7, 1875.